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ABSTRACT

This literature review examined the relationship between depression and marital interaction patterns in marriages where one spouse is depressed. The social exchange process between the depressed individual and the spouse is dysfunctional in comparison to the processes in non-depressed couples and may be responsible for the maintenance of depressive symptoms. There appear to be deficits in assertive behavior, in defending personal rights, and in making clear and specific requests of the non-depressed partner. An examination of the problem of depression from the perspective of the non-depressed spouse can serve as a needed supplement to the usual patient-centered approach to research and treatment. Future work in research, assessment, and intervention should ultimately adopt a more integrated, interactional approach, both methodologically and conceptually. Depression has been conceptualized as a self-perpetuating interpersonal system. Depressive symptomatology appears to be congruent with the ongoing interpersonal and marital situation of the depressed person. Essentially, the depressed spouse and the marital partner collude to create a system in which feedback is difficult to receive and various efforts to change become system-maintaining in the long run. The results of this study indicated that since there is a strong relationship between depression and marital distress, if a couple presents with marital discord, clinicians should be aware of potential depression in one spouse. Marital and family therapy need to be more widely considered as either primary or adjunctive treatments for depression. (LLL)

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of the Requirements for the Degree

Doctor of Psychology

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by

Brian John Seely

May 1991

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THE RELATIONSHIP BETWEEN DEPRESSION AND MARITAL INTERACTION PATTERNS

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ABSTRACT

THE RELATIONSHIP BETWEEN DEPRESSION AND MARITAL INTERACTION PATTERNS

by

Brian John Seely

Relevant research examining the relationship between depression and marital interaction patterns when one spouse is depressed is reviewed. Methodology is critiqued, including design strengths and weaknesses, and implications for understanding and applying this research. The substantive issues examined include verbal interactive processes and the subjective experiences and perceptions of the interactions. Interactive patterns are characterized by excessive amounts of negativity, coercive processes, skill deficits, and asymmetrical communication. The perceptions of the marital interactions held by both the depressed partner and the spouse are significant considerations in assessment and intervention. Implications for further research and treatment are discussed.

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THE RELATIONSHIP BETWEEN DEPRESSION AND MARITAL INTERACTION PATTERNS

Introduction

This paper reviews the literature over the last 10-15 years concerning the relationship between depression and marital interaction patterns in marriages where one spouse is depressed. There is a growing body of empirical literature that has begun to explore interpersonal processes in depression with a general focus on depression and marital distress (Gotlib & Hooley, 1988). It is evident from this literature that there is an effort being made to specifically identify problematic interactional patterns in depressed marriages. The purpose of this review is to examine the recent evidence regarding the relationship between depression and marital interaction patterns, and to highlight a number of key issues that must be addressed and understood if research and treatment in this field is to advance significantly.

Several years ago, Gotlib and Hooley (1988) stated that depression was the most common of psychiatric disorders, responsible for 75% of admissions to psychiatric hospitals. Perhaps because depression is so prevalent, the disorder has captured the attention of many investigators and clinicians in both the psychological and medical arenas.

Along with the plethora of literature on depression has come a growing emphasis on the interpersonal aspects of depression (e.g., Brown & Harris, 1978; Cane & Gotlib, 1985; Coyne, 1976b; Gotlib, 1982; Hooley, 1986; Hooley, Orley, & Teasdale, 1986). This focus on the depressed person's interpersonal functioning has directed some investigators to investigate the role of close relationships in the

etiology, course, and treatment of depression. In addition, it appears that there is a concurrent emphasis on how depression may impact close relationships. It is not surprising then, that the marital relationship has become a major focus of attention.

Interaction research as applied to psychiatric populations originated in the study of the etiology, progression, and treatment of schizophrenia (Hirsch & Leff, 1975). Many studies in the area of depression and marital interaction patterns appear to draw upon the experience and expertise of investigators who studied the communication patterns in families of psychiatric patients. For example, Bateson (1973) found differential patterns of communication between schizophrenic family members relative to normal family members. Such studies often include developmental theories of family relationships and imply that disturbed interaction patterns over long periods of time are instrumental in the development of psychiatric pathology at a later stage. Much of the research reviewed in this paper draws heavily on the research techniques and methods of these earlier works.

The present review begins with an examination and critique of the methodology applied to this field of study, including definitions of major terms used, followed by a brief review of the assessment instruments typically utilized. This section is followed by a critique of the research design most often employed in this research. The design is described and its strengths and weaknesses presented. In addition, implications for understanding and applying this research are examined.

Before going on to a specific focus on the marital interaction patterns associated with depression, the general relationship between depression and marital distress provides a context for the more specific dysfunction. Subsequent to this, the particular interactive processes associated with depression are examined, including verbal behaviors and subjective experiences of the interactions. The paper concludes with implications for treatment and further research.

Methodological Issues

The consumer of research must have an understanding of the major terms and research designs utilized in a chosen field in order to make accurate judgments regarding the validity and generalizability of such studies. In this section, major terms are defined and the assessment instruments used are reviewed. In addition, the research design is critiqued, and applications for applying this research are offered.

Definitions

The definitions offered in the following section are not to be considered comprehensive. Rather, the terms are defined as they apply to the research being reviewed. More attention is given to the term depression since an adequate understanding of its interactional nature is paramount in comprehending and applying the results of the research in this field.

Depression. Clinical depression is most often defined in this research literature according to the criteria in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised (American Psychiatric Association, 1987). The reader is referred to this publication for a complete description of this disorder.

Hinchliffe, Hooper, and Roberts (1978) presented a comprehensive overview of the models of depression as they have developed over the centuries. It is beyond the scope and purpose of this paper to present these models, yet the reader may want to become familiar with them and is referred to this source. Hinchliffe et al.'s (1978) discussion demonstrated that the conceptualization of depression has grown increasingly more complex over the years. However, none of the models takes into consideration the role of interpersonal interaction in depression. Interaction of the depressed person with another person has largely been ignored. In the last 10 to 15 years, however, there has been increased attention paid to this matter, and an

interactional definition of depression in light of understanding the research being reviewed is now presented.

Much, if not all of the research in this area is built upon Coyne's (1976b) interactional description of depression. He argued that the depressed individual interacts with others in the environment in such a way that support from others is increasingly diminished and depressive information is elicited. This feedback to the depressed individual increases the level of depression and serves to strengthen the pathological pattern of depressive behavior and the negative responses of the spouse. According to Coyne (1976b), a depressive spiral develops within the context of the interaction of the depressed person with the environment.

While this description of depression does not deny the existence of significant intrapersonal factors or the importance of biochemical or genetic factors in the etiology of depression, it emphasizes the interaction between the depressed person and the social context in which the depressed individual is found. One implication of this approach is that an understanding of the interpersonal context is necessary for an understanding of depression. Traditionally, the significance of this context has been underestimated.

Coyne's (1976b) conceptualization of depression as a self-perpetuating interpersonal system has been supported and elaborated by several investigators (Coyne, 1976a; Gotlib & Robinson, 1982; Howes & Hokanson, 1979; King & Heller, 1984). For example, Howes and Hokanson (1979) studied the conversational content of subjects when interacting with an individual exhibiting depressive behavior. The interactions took place between college students in the context of waiting for an experiment to begin, with one of the students being a confederate trained to play a depressive role. Although the interpersonal context was contrived and cannot be expected to correlate highly with marital interaction, the results supported Coyne's (1976b) hypothesis regarding the reaction of an individual to one who is depressed.

The non-depressed individual tends to send double messages of both reassurance and rejection, and to engage in long periods of silence when interacting with a depressed person. When affectively supportive remarks (e.g., reassurance, empathic statements) from the non-depressed individual are paired with rejection (e.g., punishing or insulting remarks), then the depressed person quite likely becomes confused and ultimately unsatisfied in interpersonal interaction.

In his work, Coyne (1976a, 1976b) has indicated that the reluctance of others to continue to interact with the depressed person is due to a negative mood that results from the interaction. However, Howes and Hokanson (1979) did not find any evidence in their study supporting this conclusion. There was, instead, evidence of distinctive conversational patterns and perceptions clouded by a relatively high rate of rejection in the form of punishing or insulting verbalizations. These patterns of interaction are discussed more extensively in the main body of this paper.

In a related study, Gotlib and Robinson (1982) tested Coyne's (1976a) hypotheses that subjects interacting with depressed persons (a) feel depressed themselves after the interaction, (b) do not want to engage in further conversation with their depressed partners, and (c) exhibit more negative verbal and nonverbal behavior than positive in their interactions. Of these three hypotheses, Gotlib and Robinson (1982) found support only for the last prediction and not for the first two. This study has some serious limitations that may have had significant effects on the results: A control group was not utilized, and the responses assessed were those of female university students to other mildly depressed female students. The results therefore are likely not generalizable to more severe forms of depression in intimate heterosexual relationships. Another study (King & Heller, 1984) suggested that the depressed mood experienced by those interacting with a depressed person following the interaction, along with the verbal messages of rejection may be true but not as robust as Coyne (1976a) originally suggested.

Marital distress/maladjustment. Marital distress, marital maladjustment, and marital discord are terms that are used interchangeably in this paper. These terms are defined empirically largely by self-report measures such as the Dyadic Adjustment Scale (Spanier, 1976). More is stated about such measures in a later section of this paper.

Marital interaction. Marital interaction includes both verbal and non-verbal forms of communication. It is assessed primarily by self-report measures and experimenter observation. This paper focuses on verbal interaction since this is also of primary emphasis in the research reviewed.

Major Assessment Instruments Used

Before moving on to other methodological issues, it is necessary to examine the major assessment instruments used in the research since interpretation of results is based on the adequacy of these instruments. In most instances, depression, marital interaction and satisfaction, and the individual's mood following interaction were assessed using self-report measures. The validity and reliability of the instruments are also discussed in this section.

Depression. All of the measures of depression are based on self-report and, in most cases, a clinical interview by an experienced clinician. The Beck Depression Inventory (BDI) is a 21-item self-report measure of the severity of depression in which the subject endorses a number of symptom categories. It has been shown to have high internal consistency and validity (Beck & Beamesderfer, 1974), and has been widely used in the research on depression. The Zung Self-Rating Depression Scale is similar to the BDI. It is also used to measure the level of depression and was selected as the test of choice in many of the studies because of its adequate psychometric properties (Zung, 1965) and because it does not take long to complete.

A third and somewhat dissimilar self-report measure of depression is the Hamilton Rating Scale for Depression (HRSD). This 17-item inventory is completed

by a clinician on the basis of a structured clinical interview, and it too has acceptable levels of interrater reliability (Bech, Gram, Dein, Jacobsen, Vitger, & Bolwig, 1975) and validity (Carroll, Fielding, & Blashki, 1973). Finally, one study (McLean, Ogston, & Grauer, 1973) used the Depression Adjective Check List (DACL; Lubin, 1965). The DACL is composed of seven different forms. The first four consist of 32 self-descriptive adjectives, while the last three forms include 34 such adjectives. The DACL is self-administered and takes approximately five minutes to complete. Due to the ease of administration and its adequate reliability and validity (Lubin, 1965) the DACL is widely used in research where depression is a measured variable.

Marital interaction and marital satisfaction. Marital satisfaction was also measured by self-report and observation. A popular self-report instrument is Spanier's (1976) Dyadic Adjustment Scale (DAS). Empirically derived, the DAS has satisfactory reliability and validity, and is becoming used increasingly in marital assessment research (Spanier, 1976). Another self-report instrument widely used is the Marital Adjustment Test (MAT) (Locke & Wallace, 1959). There is evidence to support its reliability and validity (Haynes, Follingstad, & Sullivan, 1979) in its assessment of various aspects of marriage including sexual compatibility, value differences, and affection.

Marital interaction and the responses of spouses to their partners' depressive behaviors were primarily assessed by observation and interview. The Impact Message Inventory (IMI) (Kiesler, 1984) is an exception in that it is a self-report measure of the impact of the individual's interpersonal style on another (the spouse in these cases). It is composed of 15 subscales (e.g., Dominant, Mistrusting, Agreeable, Nurturant) that lie in the two dimensions of friendly-hostile and dominant-submissive. Cluster scores calculated in the studies reviewed in this paper include dominant, hostile, submissive, and friendly. The IMI has been found

to discriminate between the impact of depressed and non-depressed individuals interacting with strangers (Howes & Hokanson, 1979) and between couples with a depressed spouse and those without a depressed spouse (Kahn, Coyne, & Margolin, 1985).

The major observational coding form used in this area of research has been the Kategoriensystem fur partnerschaftliche Interaktion (KPI). There are four parts (including non-verbal expressions of mood, and verbal evaluations about self, partner and the relationship) in this 28-category system, and it is reported to have more than adequate levels of reliability and validity (Linden, Hautzinger, & Hoffman, 1983).

Mood following interaction. Several researchers were interested in measuring the mood of individuals following their interaction together. The Today Form of the Multiple Affect Adjective Checklist (MAACL) (Zuckerman & Lubin, 1965) was used for this purpose. This checklist consists of 91 adjectives, and the respondent is required to endorse all of those adjectives that describe feelings following the interaction. Zuckerman and Lubin (1965) suggested that the MAACL provides scores on three subscales: Depression, Anxiety, and Hostility. However, a recent factor analysis (Gotlib & Meyer, 1986) showed that this instrument also provides independent scores for positive and negative affect. These two subscales were used in the studies reviewed. The instrument used to assess an individual's perception of an interpersonal interaction, The Impact Message Inventory (IMI) (Kiesler, 1984), is described above.

Experimental Design

In order to apply the results of the research in this field to clinical practice, it is necessary to have an adequate understanding of the experimental design used. This portion of the paper defines the type of design as well as its strengths and weaknesses. The section concludes with implications for applying this research.

Description. All of the empirical studies reviewed in this field are correlational designs. This type of design investigates the interrelationships between variables that are not manipulated by the experimenters. For the most part, the subjects in these studies were selected because they met certain measured criteria: depression and marital discord. The purpose of these correlational studies was to estimate the degree to which variables such as depression and marital interaction difficulties covaried. Causality cannot be inferred from the data obtained.

Strengths and weaknesses. Self-report and direct, obtrusive observation were the major methods for collecting data in these studies. These methods contain certain strengths and weaknesses which must be illuminated before attempting to understand the significance and application of such research. First, self-report measures were widely used in the studies reviewed due to the fact that marital distress and depression may be best defined by what the subjects actually report about their own experience. Certainly, what each spouse has to say about the perceived state of the marriage is invaluable. Also, an individual's personal and subjective report concerning how he or she experiences depression is most useful to the clinician. Subjects are in a unique position to report upon their own thoughts and feelings. Secondly, the self-report measures used in these studies were convenient due to their ease of administration. This made it possible to assess the marriages of a larger number of subjects than if every marriage had to be evaluated through the use of clinical interviews.

Many studies used both self-report and direct observation. This combination tended to make the findings more robust. The obvious advantage to using the observational coding systems represented in these studies is the amount of specificity obtained. Trained clinicians directly observed the interactions between spouses rather than solely relying on inherently biased self-report. In addition, the

assessment of non-verbal behavior would have been impossible without direct observation.

As stated above, the studies reviewed in this paper were correlational in their design. Therefore, the issue of causality cannot be adequately addressed. For example, it is still not clear whether depression causes marital distress and therefore certain negative patterns of interaction, or if marital distress produces depression. The direction is not certain, yet these studies do establish a very clear relationship between depression and marital interaction patterns. More will be said about this below.

There are several limitations to keep in mind in attempting to digest this literature. First, self-report measures such as those used in these studies are prone to response biases. For example, some subjects may have distorted their depressive symptomatology in light of their own motives or self-interest. Consequently, the experimenters may not have obtained an accurate description of the subject's depression or marital state. These biases may have confounded the data in some ways. It is possible, for example, that a spouse's report of the status of the marriage may have been colored by a felt need to voice resentment towards the other or to take revenge for past hurts and disappointments, thereby presenting an inaccurate picture of the state of the marriage. The marriage relationship may have been reported as more discordant than it was in reality.

A similar concern can be applied to the use of direct and obtrusive observation. Response biases and reactivity of assessment are limitations in the research under review. As a result of being observed, it is possible that the couples in the studies presented themselves in a better or worse light than is characteristic of their marriage due to social desirability or to personal vindictive motives. This, of course, would influence the degree of correlation between the two constructs of depression and marital interaction patterns.

Implications for Understanding and Applying this Research

The strengths and weaknesses of the correlational design and the measures employed are important considerations when reading the literature in this area. The danger of ascribing causation or directionality to the variables studied is one to be avoided. In addition, due to the pervasive effects of response biases, the reader must recognize that some data may be confounded by such response styles as social desirability. The results of studies that incorporate the use of observation and self-report when measuring the same or similar constructs can be understood and applied with greater confidence than either alone.

Relationship Between Depression and Marital Distress

In this section of the paper, emphasis is placed on clarifying the relationship between depression and marriage generally and depression and marital distress specifically. That there are such relationships is unequivocable. What is less clear is the issue of causality. That is, it is not known whether depression causes marital distress or whether marital distress causes depression.

Depression and Marriage Generally

The relationship between marriage and depression on a very general level has been explored, and this will be looked at briefly before moving on to marital distress. Some studies have demonstrated that, within marriages, women were 1.6-3 times more likely to be depressed than were men (Weissman & Boyd, 1983; Weissman & Klerman, 1977) and that married women were at higher risk for depression than single women (Overall, 1971). This helps explain why much, if not all of the research reviewed in this paper focuses on the wife's depression rather than the husband's. Note that Overall's (1971) finding regarding married versus single women could be the result of the social context of marriage in which the woman's depression occurs. Perhaps married women's depression is more often reported and

brought to the attention of mental health workers because their husbands are complaining about their behavior. The single woman is less likely to be in such a close, long-term relationship and therefore her depression is more likely to go unreported.

Depression and Marital Distress Specifically

Prior to a more specific examination of marital interaction patterns in marriages where one spouse is depressed, it is necessary to establish that there is clearly a relationship between marital distress and depression. Although there has been a plethora of research focusing on interactional difficulties in the marital context, few studies have addressed the emotional aspects of the interactions (Hinchliffe, Hooper, & Roberts, 1978). Two major studies (Brown, Bhrolchain, & Harris, 1975; Weissman & Paykel, 1974) conducted within the last 15 years or so have specifically addressed the interpersonal problems of depressed women. Brown et al. (1975) demonstrated that an emotionally intimate relationship is important to the woman's sense of well-being, while Weissman and Paykel (1974) focused on the damaging effects of conflict and hostility on the woman's mood in intimate relationships within the immediate family.

A strong association between marital distress and depression is suggested by a number of more recent investigations (Beach, Nelson, & O'Leary, 1988; Coleman & Miller, 1975; Crowther, 1985). Crowther (1985) found a statistically significant correlation between hospitalized subjects' self-reports of depression and marital maladjustment. This correlation was strengthened as well by the discovery of a significant correlation of therapist ratings of depression and marital adjustment. In a multitrait-multimethod study, Coleman and Miller (1975) also found a significant positive correlation between depression and marital maladjustment across all levels in their study with referred outpatients.

That there is a relationship between depression and marital discord is not disputed in the literature. What is less clear is the identification and delineation of specific interactional behaviors and patterns which play a major role in the maintenance of this relationship. It is a more detailed examination of such interaction and its association with depression that is now examined.

Substantive Issues

The major findings of the research reviewed are now presented. Emphasis is placed on the verbal interaction processes within the marital context. A secondary emphasis falls on the subjective experience and perception of the marital interaction as reported by both the depressed partner and the non-depressed spouse.

Verbal Interactive Processes Associated with Depression

A search of the literature in this field shows that there are identifiable verbal interactive processes in marriage that are linked with depression. These can be grouped into one of three broad categories of verbal processes. Specifically, the verbal interactions in depressed marriages are characterized by (a) coercive processes, (b) skill deficits, and (c) distortion or asymmetry.

Coercive processes. A number of studies have focused on the coercive processes involved in the interaction patterns in marriages where one spouse is depressed (Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985; Hautzinger, Linden, & Hoffman, 1982; Hooley, 1986; Hooley & Teasdale, 1989; Hops, Biglan, Sherman, Arthur, Friedman, & Osteen, 1987; Nelson & Beach, 1990; Smolen, Spiegel, & Martin, 1986). Coercion theory was developed by Patterson (1982) to help explain dysfunctional interactional patterns in families with aggressive children. Coercion involves the manipulation or control of another's behavior through aversive means. For example, one person may exhibit an aversive behavior (e.g., a temper tantrum) to which the other yields. The aversive behavior of the first

is reinforced by the yielding of the other; this giving in is negatively reinforced when the first person's aversive behavior stops. This coercive behavior pattern is believed to be initiated by the display of aversive behavior followed by its reinforcement by the other person.

While not directly aggressive, there seem to be a group of depressive behaviors that are seen by others as aversive. A number of studies have provided evidence for this hypothesis as they demonstrate that the behavior of depressed people can have a negative impact on others (Coyne, 1976a; Gotlib & Robinson, 1982; Strack & Coyne, 1983; Youngren & Lewinsohn, 1980). For example, Gotlib and Robinson (1982) found that depressed people made more negative statements concerning themselves and complained more about other things than they did about the person they were addressing. The investigators did not explain why this latter communication was viewed by the listener as negative. It could be that the non-depressed partners grew weary of the depressed spouses' complaints about things over which neither of them had any control. In a related study, Linden, Hautzinger, and Hoffman (1983) discovered that depressed individuals exhibited behavior that could be considered aversive, including verbal negative self-evaluations and negative well-being and pessimistic statements about the future.

One of the first studies to analyze marital interaction patterns with a specific focus on coercive processes was conducted by Hautzinger, Linden, and Hoffman (1982). The investigators concentrated on interactions between marriage partners who had been married for a long time, using a control group of non-depressed couples who were requesting marital therapy. The BDI and the KPI were the instruments used to measure depression and to assess the interaction. This study and an earlier one by Hinchliffe, Hooper, and Roberts (1978) have much in common. Hautzinger et al. (1982) based their work on the Hinchliffe et al. (1978) findings that interactions between depressed patients and their spouses were more negative,

uneven, more disruptive, and contained more emotional outbursts when compared with non-depressed marriages. Hautzinger et al. (1982) showed that the interaction between partners in a marriage where one spouse is depressed (most often the woman) is both reinforcing and aversive. The investigators suggested that depressed persons are reinforced by their partner's supportive and helping behavior early on in the relationship. However, in the passage of time, the non-depressed partner becomes less tolerant of the depressive behavior and tends to react to the depressed spouse in an aggressive manner. The non-depressed spouse is then negatively reinforced for this behavior when the complaining, negative self-evaluations, negative mood expressions, and the like stop.

For a time, the interaction is stabilized, but it only grows more coercive in nature. An approach-avoidance pattern develops as a result of this coercive exchange. Both husband and wife approach and engage with each other in response to the punishing effect of the depressive behavior, and this approach behavior is negatively reinforced by the cessation of depressive behavior (i.e., negative self-evaluations and pessimistic statements). Avoidance behavior is brought on by the aversive quality of this negatively controlled environment. Avoidance is initially negatively reinforced for the depressed spouse, but eventually leads to more depressive behavior. In the long run, it seems, engaging in depressive behavior is the only way the depressed spouse can control the environment.

A particularly well-designed and often-cited study (Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985) was based on the application of coercion theory to depressed behavior within marriages. This study examined the impact of the wife's depressed behavior on the probability of reducing the husband's aggressive behavior in non-distressed marriages. These results were compared to a second group of non-depressed control couples. A third group, consisting of couples whose marriages were both distressed and in which the wife was depressed, was also

included in the study since the authors hypothesized that such a coercive relationship would be more likely to occur in marriages where there was both depression and distress.

Biglan et al. (1985) identified some interactional patterns common to depressed couples that appear to be instrumental in the etiology and maintenance of the coercive process. Compared to non-depressed wives, depressed wives were more self-derogatory, complained about physical and psychological functioning, complained about things unrelated to the person they were addressing, and engaged in depressive non-verbal behavior such as downcast eyes, frowns, and sighs. The investigators labeled these behaviors as depressive because, empirically, the behaviors were delivered at a higher rate by the depressed women than by the non-depressed women in both groups. Depressive behavior was discriminated from aggressive behavior (e.g., provocation, humiliation, threatening, arguing) in that the rates of the two different kinds of behavior were not correlated. The assertion that such depressive behaviors are aversive to others is supported by Howes and Hokanson's (1979) work that demonstrated that this kind of behavior elicits negative reactions from those with whom the depressed person is interacting.

Biglan et al. (1985) were primarily interested in the degree to which the husband's aggressive behavior depended upon the wife exhibiting prior depressive responses. In their analysis of conditional responding, they found support for the coercion theory in that depressive behavior was functional in reducing the aggressive responses of the husband. This was true only for couples in which there was also marital distress and underscores the important role coercive control plays in the behavior of depressed women in discordant marriages. It is interesting to note that coercive control was not evident among depressed-only couples. This raises the question of whether the coercive patterns identified were a function of marital distress rather than depression. Biglan et al.'s (1985) design did not allow

for this question to be answered since they did not include in the study couples in which there was marital distress but no depression. However, the results do support the notion derived from coercion theory that the wife's depressive behavior is one way of reducing the husband's aggressive behavior, while, reciprocally, the husband can gain some relief from the wife's depressive behavior by engaging in aggressive behavior.

This important finding was supported by the work of Hops, Biglan, Sherman, Arthur, Friedman, and Osteen (1987) at the Oregon Research Institute. These investigators used home observations to assess the family interactions of depressed women relative to normal families. They stated three hypotheses derived from coercion theory including the possibility that the depressive behavior of the depressed mothers in the study would serve to decrease the aversive behavior of other family members. They found that the depressed mothers' behavior lowered the probability that their husbands would demonstrate aggressive affect and behavior. This is consistent with Biglan et al.'s (1985) results suggesting that the woman's depressive behavior is functional in providing her with short-term relief from the aversive (i.e., aggressive) behavior of other family members. The tendency for family members' aggression to reduce or suppress the subsequent depressed affective behavior of the mothers implies that this aggressive behavior may be likewise reinforced by avoidance of her depressive behavior. In consideration of all these data, it appears that the depressed women and their families become involved in a coercive interactive pattern that encourages high rates of aversive interchanges.

Another well-designed study (Nelson & Beach, 1990) examined the effects of depressive behavior on spousal aggression and delivered supportive and contrasting data to this area. A strength of this study is that the authors included depressed-discordant couples, non-depressed-discordant couples, and normal couples from the

community. This design enabled them to specifically investigate whether the coercive process is due more to depression or to marital discord. The study replicated important aspects included by Biglan et al. (1985) and Hops et al. (1987). Specifically, by using a non-depressed-discordant control group, Nelson and Beach (1990) demonstrated that the Biglan et al. (1985) description of depressive behavior is unique to depressed marriages and is not confounded with marital discord.

In contrast, Nelson and Beach (1990) did not find support for the previously stated hypothesis, unique to depressed-discordant couples, that depressed wives' depressive behavior reliably suppresses husbands' aggressive behavior. Although they did find a between-group difference in the conditional response of husbands to the wives' depressive behavior, the suppression of aggressive behavior was strongest for the non-depressed-discordant couples. In addition, the strength of this suppression effect was significantly related to the duration of marital discord. The longer the couples had experienced marital discord, the less effective was the wife's depressive behavior in suppressing the aggressive behavior of her husband. Thus, the presence and influence of the coercive process may have more to do with marital discord and its duration than with depression.

However, the authors did admit that there was a "nonsignificant tendency" (Nelson & Beach, 1990, p.179) for depressive behavior to suppress spousal aggression. This tendency may have been significant, and therefore in support of Biglan et al. (1985), if there had been an n greater than 20 in each cell group of their study. With an n that small, the suppression effect would have to have been quite large in order to be detected. The low power of this design, in addition to the reduced suppression effect in the depressed-discordant group due to the long duration of marital discord, may explain the failure to find significant results in this area.

Taken together, these studies clearly indicate that there is a coercive relationship between depressive behavior and the suppression of spousal aggression. Depressive behaviors appear to be negatively reinforced on an increasingly lean schedule over time in the context of marital maladjustment. A depressed wife may complain about her life, encouraging her husband to cease or decrease any critical remarks toward her. Due to this reduction in criticism, the wife's depressive behavior is negatively reinforced and increases over time. If marital discord over a long period of time tends to decrease the ability of the depressive behavior to suppress spousal aggression as Nelson and Beach (1990) suggested, then the wife would have to increase her depressive behavior in order to achieve similar levels of suppression of aggression in the spouse. These last statements are hypothetical at this point as it appears that no study to date has demonstrated empirically that such shaping of depressive behavior actually occurs in this manner.

Two studies (Hooley, 1986; Hooley & Teasdale, 1989) examined a related form of coercive process known as expressed emotion. Expressed emotion has been thoroughly researched in the interactional patterns of families of schizophrenic patients (Kuipers, 1979), and has just recently been a focus of attention regarding depressed individuals and their spouses. Expressed emotion is defined as the extent to which spouses of depressed patients express hostile, critical, or affectively overinvolved attitudes toward their depressed partner (Hooley & Teasdale, 1989). It is assumed that the criticism expressed by a spouse during a clinical interview is representative of that spouse's behavior in interactions with the depressed individual outside the clinical setting.

Hooley (1986) designed a study to investigate the interactional correlates of low and high levels of expressed emotion in a sample of depressed hospitalized patients and their spouses. She considered both the husband and the wife in her

assessment of the interactions. Expressed emotion was rated using the Camberwell Family Interview (CFI) and the KPI was used to code the interactions.

Hooley's (1986) findings suggested that the verbal behavior of depressed spouses who are married to a high-expressed emotion partner is characterized by less expression and less openness than that of individuals who have a low-expressed emotion partner (i.e., one who criticizes less). The depressed individual's essentially passive behavior could be an attempt to avoid confrontation with a highly critical spouse, or the behavior itself may have elicited criticism from the non-depressed spouses. Due to the correlational and descriptive nature of the design, the direction of the influence cannot be determined. Although the data Hooley (1986) presented indicated that there are differences between the behavior of low- and high-expressed emotion couples, perhaps a more important issue is indirectly raised concerning the level of expressed emotion and depression relapse in hospitalized patients.

This last issue was explored in a subsequent study (Hooley & Teasdale, 1989) that demonstrated a relationship between expressed emotion in spouses and relapse in depressed patients. Hooley and Teasdale (1989) discovered that patients living with highly critical spouses were significantly more likely to relapse than patients who were living with spouses who delivered very little criticism. Interestingly, the most powerful predictor of later relapse was the depressed patient's view of the spouse's level of expressed emotion. Those who felt their spouses were highly critical of them, even if they were not living with an objectively critical partner (as measured by the CFI), were more likely to relapse than those who felt less criticized.

That both perceived and actual high levels of expressed emotion are associated with relapse in depressed individuals lends support to Nelson and Beach's (1990) hypothesis that, over time, the depressed wife's depressive behavior will increase in order to maintain a particular level of suppression of spousal aggression. If the

depressed spouse were hospitalized in the past, a relapse would be probable as depressive behaviors increase. The category of spousal aggression includes behaviors that are also attributed to expressed emotion (e.g., hostility, complaining, and expression of critical attitudes). Since expressed emotion and spousal aggression are similarly defined constructs, this proposed link between the two studies (Hooley & Teasdale, 1989; Nelson & Beach, 1990) appears to be valid.

Skill deficits. The studies reviewed so far in this paper have examined coercive processes involved in marriages where one spouse is depressed and in which there is often also marital discord. Several studies have also investigated the role of certain skill deficits in the interaction patterns of such marriages (Biglan et al., 1985; Bullock, Siegel, Weissman, & Paykel, 1972; Hops et al., 1987; Smolen, Spiegel, & Martin, 1986). Much of this work has originated from the study of coercive processes in that it has been discovered that both depressed women and their spouses appear to lack the skills necessary to interrupt the development of coercive interactional patterns.

Biglan et al. (1985) investigated three types of behavior that, were the couple skillful in utilizing them, would help the depressed woman and her spouse discuss and solve problems, therefore possibly decreasing the depression. These investigators hypothesized that verbal facilitative behaviors such as giving approval, agreeing, empathizing, accepting responsibility for one's behavior, and making positive statements about something other than the person being addressed would positively affect the coercive processes and hence, lead to decreased depression. Specifically, Biglan et al. (1985) thought that facilitative behaviors of one spouse would reduce the probability of aversive behavior delivered by the other, and that when such behaviors were demonstrated contingent upon the spouse's prosocial behavior that such facilitative behaviors would be positively reinforced. Biglan et al. (1985) also examined two other kinds of skillful behaviors: self-

disclosure of a positive nature about one's thoughts and feelings, and the offering of solutions.

As they predicted, Biglan et al. (1985) found that depressed-discordant couples lacked skills for coping with the coercive interactional processes in their marriages. Facilitative behavior was discovered to be emitted at a lower rate in these couples than in depressed-only or control-group couples. Thus, the lack of facilitative behavior may be due more to marital discord than to depression. Nonetheless, an interesting and clinically relevant interactional issue did emerge. In depressed-discordant marriages, when the husband exhibited facilitative behavior, the wife engaged in fewer depressive behaviors. However, it was in these couples that there was less facilitative behavior than in normal couples. Even though the husbands' facilitative behavior could reduce the wives' depressive actions, there was more depressive behavior in these couples, and the facilitative behavior that could have reduced it was not occurring. The absence or deficiency of such positive behaviors can be viewed as a skill deficit in interrupting the coercive processes.

To summarize, Biglan et al. (1985) found that facilitative behavior was associated with a reduction in depressive behavior. This is commensurate with Hops et al. (1987) who found in their study that family members' expression of caring affect and engaging in facilitative behaviors was shown to decrease the depressive affect of the depressed mothers. However, in these studies such positive behavior was not prominent in depressed-discordant marriages. One would think that the reduction of depressive behavior would negatively reinforce the facilitative behavior, but for the couples in Biglan et al.'s (1985) study, it seems that the reduction of depressive verbal actions did not reinforce the non-depressed partner's facilitative behavior. Instead, they reinforced aversive behavior and hence, the entire coercive process. It could be, then, that the factors involved in maintaining the coercive interaction (some of which have been outlined above) are more

influential than the mere presence of facilitative behavior. Clinicians who are treating depression in the marital context must be aware of this possibility and aim not only to increase facilitative behaviors in such couples, but also to attend to the more subtle, underlying coercive processes.

Another study (Bullock, Siegel, Weissman, and Paykel, 1972) examined the marriages of normal and depressed women in regard to communication, sexual relations, dependency, and interpersonal friction. In line with the present focus on skill deficits, the investigators found that the depressed women, in contrast to the non-depressed women, exhibited deficiency in communicating with their spouses. For example, depressed wives found it difficult and embarrassing to self-disclose, especially about sexual matters, and rarely did they openly and clearly address problems concerning their relationship or attitudes with their spouses. In addition, the depressed women had more difficulty making decisions and were less assertive than their non-depressed counterparts. These behaviors identified as deficits could very likely be the result of depression rather than reflecting a true skill deficit. That is, the depressed women may have such communication skills in their interactional repertoire, but they may not be able to access them due to depressive symptoms such as decreased motivation, social withdrawal, obsession with negative thoughts, and the like. Bullock et al. (1972) did not address this issue.

With the above criticism in mind, a closer examination of results from the Bullock et al. (1972) study is now undertaken. These investigators found that the depressed wives exhibited deficiencies in their autonomy (i.e., they were more submissive than non-depressed wives) and in their capacity for intimacy. These deficits contributed to increasing tension within the marriage. The depressed wives supposed inability to communicate openly and clearly made it difficult to share matters of emotional significance (i.e., issues about which the depressed wives had strong feelings) with the husbands in the study. Thus, the depressed wives were

left alone with their suffering and emotional pain, causing more withdrawal. Furthermore, the depressed wives contributed to their sense of isolation and to the tension in their marriages by believing that their husbands would intuitively sense and respond to the wives wants and needs when in fact the husbands did not know what their spouses were feeling and thinking. This impaired communication led to misinterpretations and further marital discord.

Deficits in assertive behavior were also identified. The depressed spouses appeared to have a higher need for approval and reassurance from the husbands than did non-depressed spouses (Bullock et al., 1972). However, it was discovered that the depressed wives lacked the skills necessary to make requests and opinions known to the husbands. In addition, because of the needs for approval and affirmation, the depressed wives were hesitant to differ with their husbands on even trivial issues. As these feelings, requests, and opinions were suppressed, resentment for the husbands grew which in turn seemed to have a negative effect on the wives' degree of depression.

In line with the skill deficit aspect of interpersonal interaction, Smolen, Spiegel, and Martin (1986) examined the effectiveness of depressed women in discordant marriages in defending themselves from the rights-infringing (transgressive) behaviors of their husbands. These investigators believed that if the wife had little ability to defend her rights in her marriage, and if she were married to a man who engaged in high frequency rights-infringing behavior, she would likely experience marital dissatisfaction and depression. So, they set out to compare the levels of marital discord and depression in three groups of married couples. The couples (N = 75), who were recruited through local newspaper and radio advertisements, were assigned to one of three groups based on scores obtained from instruments that were designed especially for this study (no reliability of validity data were offered).

In the first group (n = 7) were couples who reported high levels of transgressive behavior by the husbands and ineffectual responses from the wives, as well as high levels of transgressions by the wives and ineffectual responses from the husbands. Group two (n = 28) consisted of couples who reported an elevated level of one of these patterns, while the third group (n = 40) included couples who reported low levels of both of these patterns. Smolen et al. (1986) hypothesized that the couples in the first group would be more discordant and depressed than couples in the second group, and that couples in both the first and second groups combined would demonstrate more dysfunction than those in group three.

This study contained several weaknesses which make the findings tentative at best, and which should be kept in mind when reviewing the results. First, the investigators did not adequately define rights-infringing behaviors. The term is a broad one and could include such behaviors as interrupting, denying the legitimacy of the spouses' feelings and opinions, and minimizing the partners' wishes and goals. A specific definition of the term would have enabled the reader to make more accurate inferences regarding assessment and treatment. Second, there was an exclusive reliance on self-report measures. Third, the small number of subjects in group one made legitimate between-group comparisons very difficult. Fourth, the subjects were volunteers and may have been different from the general population on a number of variables, none of which could be brought under control by the design of the study. Finally, because the investigators did not use a comparison group of non-depressed but discordant couples, it cannot be determined how significant a role depression played in affecting the individuals' responses.

As Smolen et al. (1986) predicted, it was discovered that higher levels of both marital discord and depression were found in couples in which both husband and wife were transgressive and ineffectual in their responses as compared to couples in which only one of the spouses engaged in either of the behaviors. In addition,

individuals in marriages with high levels of either or both of the interaction patterns reported lower levels of marital satisfaction than those with low levels of both patterns.

These data, although they must be viewed tentatively due to the weaknesses of the study, suggest that the inability to defend one's rights in the marital context may be related to depression. This inability can be considered another identifiable skill deficit in the interaction patterns of couples in which one spouse is clinically depressed.

Asymmetry or distortion. A third component that characterizes communication patterns in depressed marriages is that of distortion or asymmetry. Several studies focused directly or indirectly on this aspect (Biglan et al., 1985; Hautzinger et al., 1982; Linden, Hautzinger, & Hoffman, 1983; Merikangas, Ranelli, & Kupfer, 1979; Ruscher & Gotlib, 1988). One study (Hautzinger et al., 1982), was built upon the data provided earlier by Hinchliffe et al. (1978). Hinchliffe et al. (1978) had found that there were distinct differences in the patterns of communication between depressed and non-depressed couples. The depressed couples' communication, in contrast to the non-depressed couples, was more negative, uneven (contained more disruptions), and unbalanced.

Using the KPI (described earlier in this paper), Hautzinger et al. (1982) characterized the marital interaction using a profile sheet containing the 28 categories. They ranked the observed category frequencies for couples with and without a depressed partner. Taking each couple separately, these investigators counted the dissimilarity between the two partners' individual ranks. This information provided data concerning how each partner compared with the other on specific categories such as verbalization of bodily concerns and psychological well-being, verbal evaluations about the partner and the relationship, and disclosures about self and the relationship.

Hautzinger et al. (1982) analyzed the data on both couple and group (depressed and non-depressed) levels. At the couple level, they found that there were a number of asymmetries in the communication patterns of the depressed couples. The non-depressed husbands offered negative evaluations of their depressed partners. They also tended to be dominant and demanding, and initiated most of the observed interaction. In addition, the non-depressed husbands described themselves very positively while the depressed wives were negative in their self-descriptions. Finally, the husbands whose spouses were depressed expressed more satisfactory and comfortable feelings while they were talking than did husbands whose wives were not depressed.

The depressed wives were found to talk more about themselves and their well-being than about their husbands. Furthermore, while depressed wives evaluated themselves quite negatively, they gave positive partner evaluations. Depressed wives also expressed greater feelings of discomfort and dysphoria and engaged in more negative talking about other people than did non-depressed wives.

On the group level, Hautzinger et al. (1982) found similar results. Couples with a depressed partner expressed negative well-being, dysphoric and uncomfortable feelings, talked and asked questions about their psychological health, and over all, had more distortion in their interactions than did couples without a depressed partner.

In summary, it can be stated that couples with a depressed spouse showed an unbalanced, negative, and asymmetrical communication style. In contrast, couples without a depressed member demonstrated positive, supportive, and reciprocal interaction. The non-depressed partners of the depressed couples demonstrated positive feelings about themselves and gave evidence of high self-esteem. They evaluated their depressed partner negatively and were demanding. On the other hand, their depressed spouses verbalized negative feelings about themselves and

the future, but evaluated both their partners and their marriage relationships positively.

Hautzinger et al.'s (1982) design (cross-sectional) did not allow for any inference of causation. In other words, it is not clear whether depression is responsible for the distortion and imbalance in interaction patterns, or whether depression results from this asymmetry. As mentioned earlier, the deficiency to provide for cause and effect is common to all of the reviewed research and is not particular to this study. It was the belief of the investigators, however, that during the development of depression or following the first depressive episode, these interaction patterns influenced the course, severity and chronicity of the depression.

In a separate study (Linden et al., 1983), the same investigators presented similar results. One of the most robust findings was that non-depressed partners of depressed spouses demonstrated a significantly higher frequency of positive self-evaluation in contrast to the negative self-statements of their depressed spouses. They suggested that this asymmetrical pattern may be due to the non-depressed spouses needing to maintain an elevated mood in reaction to the negative verbalizations of the depressed spouses. Using this and additional data from their study, Linden et al. (1983) offered a two-fold explanation for the asymmetrical interaction pattern: The depressed members of the dyad delivered negative self-evaluations combined with positive statements about their non-depressed partners, and the non-depressed spouses delivered negative and demanding statements directed toward their depressed partners in conjunction with positive self-ratings. This distorted pattern creates an imbalance, attributing most if not all of the positive feelings to the non-depressed partner and the negative feelings to the depressed partner. It appears to be a vicious cycle that perpetuates the depression.

Ruscher and Gotlib (1988) replicated the Hinchliffe et al. (1978) and Hautzinger et al. (1982) findings in a community sample of 22 couples. Once again,

couples with a depressed partner were found to be less positive and more negative in their interactions than were couples in which there was no depression. This imbalance of negative and positive interaction appears to be a reliable characteristic of depressed marriages that is seen across these studies.

Biglan et al.'s (1985) study warrants further comment in relationship to asymmetrical interaction patterns. Their data provided evidence that the non-depressed partners carry most of the interactive burden. There was an imbalance here, too, as it appeared that when the wives were depressed, the focus of the interaction was on them. A major portion of the observed discussion centered on the depressed wives' negative well-being, while very little attention was focused on issues of concern to the husbands.

In addition, even though much of the focus was on the depressed wives in the observed interactions of depressed-distressed couples, Biglan et al. (1985) discovered that depressed wives engaged in very little problem solving and made few contributions to finding solutions to arguments. Furthermore, the same tendency was found to exist in the depressed-only couples. In contrast, wives in the comparison group demonstrated a tendency to offer more solutions than did the depressed wives. It appears then, that the interactive burden, at least when solutions to problems in the marriage are being sought, falls on the non-depressed spouses. Biglan et al. (1985) suggested that this imbalance of problem-solving effort is specific to depressed couples and not to couples in which there is marital discord. They cited studies in which a group of couples with depression in one spouse was not included that have shown that couples with and without significant levels of marital discord do not differ in their rates of proposing solutions.

In a drug treatment study (Merikangas et al., 1979) designed to assess marital interaction when one spouse is hospitalized with depression, patterns of interaction were evaluated weekly over a 6-week period to observe changes in interaction as a

function of treatment. Although this study contains several major limitations and flaws--including low power ($N = 9$) and multiple treatment interference--making the findings tentative at best, the investigators did discover something of significance relative to the present discussion. Regardless of treatment outcome, it was discovered that there was a significant increase in the depressed spouses power or influence in decision-making and problem-resolution. Before the drug treatment and marital therapy sessions, depressed spouses demonstrated a lack of influence in decision-making in relation to their non-depressed spouses. This supports the previously identified notion of the interactive burden being placed primarily on the non-depressed spouse. Following treatment, the depressed inpatients showed an increase in their power to affect the decision-making process, thereby reflecting a more equalized balance of power in the marriage.

The results of all the studies reviewed above in respect to the verbal interactive processes in depressed marriages can be summarized and integrated into the interactional description of depression. The social exchange process between the depressed individual and the spouse is dysfunctional in comparison to the processes in non-depressed couples and may be responsible for the maintenance of depressive symptoms. The negative aspects of the depressed spouse's conversation create conditions in which the partner's demands are withdrawn (negatively reinforcing the depressive symptoms) and support is elicited (positively reinforcing the depressive behaviors). However, in time, there are interruptions in this reinforcement process and/or stronger demands from the non-depressed spouse. The depressed spouse reacts by increasing the severity and frequency of depressive symptomatology, the only way this individual knows how to effectively control the environment. Such a coercive process is difficult to change.

The depressed person also lacks the social skills necessary to effect change in such a coercive process. There appear to be deficits in assertive behavior, in

defending personal rights, and in making clear and specific requests of the non-depressed partner. These social skill deficits contribute to the depressed individual's sense that the coercive processes are not able to be altered. The depressed person is likely to feel trapped in the maladaptive interactive processes.

These interactive dynamics contribute to the asymmetrical characteristics of the communication patterns. Because of the depressed partner's dependency and focus on negative well-being, the non-depressed partner is hesitant to leave the situation. Over time, the non-depressed spouse will lower or remove demands again and again because the depressive response of the spouse is guilt producing. One way the non-depressed partner can cope with this ongoing coercive interaction is by elevating self-evaluation, devaluing the spouse and the relationship, and assuming primary responsibility for problem solving and decision making. These maneuvers keep the non-depressed spouse from feeling guilty and depressed, but they tend to stabilize the coercive and asymmetrical interactive processes, forcing the depressed partner to continue the depressive symptomatic behavior. Taken together, all of these patterns clearly contribute to the maintenance and severity of depression; it is less clear whether they are the cause of depression or whether depression causes these patterns to develop.

Subjective Experience and Perception of the Interactions

A major aspect of the interaction patterns that has not been as thoroughly examined as those discussed above is the perceptions of the interactions of both the depressed person and the spouse and how these perceptions may impact their overt behavior. How the depressed individual or the spouse perceives the interaction between them is likely to have significant effects on the depressive behavior and on future interaction.

Gotlib and Whiffen (1989) designed a study that included an evaluation by all the couples involved of their post-interaction mood and perceptions of one another.

Following an initial assessment period to evaluate the severity of marital problem areas and depression, the inpatient couples were asked to interact over five areas that the experimenter had determined were the most problematic after calculating the severity ratings. The couples were asked to discuss each issue for about five minutes and to disclose their feelings, attitudes, and opinions concerning each area, to discuss how each problem had started, and how each partner might be contributing to the problem. The 20-minute session was videotaped, and each spouse was asked to complete the Multiple Affect Adjective Check List (MAACL) and the Impact Message Inventory (IMI).

Following their analysis of the data, Gotlib and Whiffen (1989) discovered that depressed spouses reported feeling more negative following the interactions and appraised their non-depressed partner's behavior more negatively than did the spouses in the non-depressed, medical control group. Information obtained from objective raters indicated that the behaviors demonstrated by subjects in these two groups during the marital interaction task were not significantly different. However, the perceptions of the spouses in the depressed group were characterized by more pervasive negativity than those in couples hospitalized for medical problems. These findings indicate that individuals in depressed marriages may have such negative perceptions of their interaction as a function of a long history of problematic marital interaction that was not observable in the experimental setting. This underscores Gotlib and Hooley's (1988) suggestion that investigators in this field should collect data regarding the spouses' perceptions of their marital history in an effort to gain a more comprehensive understanding of the relationship between depression and marital interaction patterns.

Gotlib and Whiffen (1989) based much of their research on an earlier study (Ruscher & Gotlib, 1988) that also examined the subjective experience of the marital interaction using similar assessment instruments. These investigators also found

that the mood of depressed individuals and their spouses was more negative following the interaction than that of the non-depressed persons and their spouses (as measured by the MAACL). It is interesting to note that the significant group differences in mood disappeared when scores on the Beck Depression Inventory-Short Form (BDI-SF) were included as a covariate in a re-analysis. It is possible then that the negative mood reported by the spouse of depressed persons is reflective of a more stable or permanent state of mood rather than a transitory one specifically related to the interaction observed. Taken together, the results of these two studies indicated that thorough investigation into how each partner perceives the marital interaction over time is a necessary component of assessment, and that the psychological health of the spouse of a depressed individual may be negatively affected by the depression.

In an even earlier study, Kowalik and Gotlib (1987) had examined the relative contributions of depression and marital distress to the quality of interactions between depressed persons and their spouses. Depressed and non-depressed psychiatric outpatients and non-depressed non-psychiatric controls engaged in videotaped interaction tasks with their spouses. As they talked, each spouse coded both the intended impact of his of her own behavior and perceptions of the spouse's communications using a talk table (see Kowalik & Gotlib, 1987, p.129 for a detailed description). Briefly, the table was used to allow speakers to register the intended impact of every message they sent on a five-point scale, from very negative to very positive. It also allowed their spouses to code the perceived impact of the message at the same time. In addition, each message was also coded by trained observers. Thus, the data consisted of both observer-rated behaviors of the couples and their own perceptions of their behaviors.

The marital interactions of depressed psychiatric outpatients were found to be characterized by negativity, and this negativity was specific to depression, not to

marital distress. The depressed patients coded their spouses' statements more negatively and less positively than did the non-depressed controls, and they intended fewer positive messages for their spouses than did the non-depressed patients. The observer ratings did not discriminate among the three groups of couples, supporting the notion that the history of the relationship is very important. It is possible that an otherwise neutral or seemingly supportive statement may have negative or aversive connotations when spoken by an unsupportive or critical spouse, characteristics which may only be uncovered in a careful assessment of the history of the relationship.

A related study (Hooley & Teasdale, 1989) dealt with the impact of expressed emotion, marital distress, and perceived criticism on the relapse rate of depressed patients. Perceived criticism was measured using 10-point Likert-type scales. These scales reflected how critical the patients perceived their spouses to be of them and how critical the patients considered themselves to be of their spouses.

The patients' perception of the criticalness of the spouse turned out to be a powerful predictor of relapse rate. Depressed individuals who rated their spouses as highly critical were more likely to relapse during follow-up than were patients who perceived less criticism. Even if patients were objectively judged by independent raters not to be living with critical spouses, they were, nonetheless, at high risk for relapse.

In summary, these findings highlight the significant influence of perception of the marital relationship on spousal behaviors. Behaviors that appear neutral or positive to an outside observer may function as negative signals for a spouse whose perception of the value and meaning of the behaviors is different from the observer's and is historically based. Studies that have included both observer- and self-ratings of marital interaction are especially valuable for a more complete understanding of the relationship between depression and marital interaction patterns.

Implications for Further Research

Several implications for future research can be drawn from this review of the literature regarding the relationship between depression and marital interaction patterns. A major issue is that of causality, and this matter is examined initially. Following this, the role of cognitive and perceptual factors are explored. Finally, the necessity of using standardized measures and procedures in this field of research is presented.

The Issue of Causality

As stated earlier, due to the correlational nature of these studies, it is impossible to infer causality. The question remains whether depression causes problematic marital interaction or whether maladaptive interaction patterns cause depression. However, it is quite clear that there is a significant relationship between the two, and future research can focus on more clearly delineating the effects of depression and marital interaction patterns on the quality of the marriage.

One of the most serious limitations encountered in the studies reviewed above was the lack of data regarding levels of marital adjustment prior to the onset of marital discord. Typically, the marital relationships of depressed persons were assessed only after one spouse had already presented with complaints of depression and/or marital distress. This methodological shortcoming, along with a general lack of data concerning marital adjustment levels following symptomatic improvement, makes it very difficult to separate the effects of depression from those of marital distress.

Future studies of depression and marital interaction that are capable of testing various models of causality are needed. One possible research design, suggested by Gotlib and Hooley (1988), involves assessing the quality of the marital relationship when one becomes depressed, and then continuing to assess the relationship of these depressed individuals over the course of their depression. By looking at the

degree to which the quality of the marital relationship covaries with the level of depression, this kind of design may produce important information about the temporal relationship between marital interaction patterns and depression. However, it still would not be possible to determine whether increased problematic marital interaction in couples in which the depression is in remission is a residual consequence of the depressive episode or is a stable characteristic of the marriage that preceded the depression. This issue can be more directly examined by assessing the marital relationships of individuals before they become depressed. However, except for specific populations that are at high risk for depression (e.g., pregnant women anticipating the postpartum period in which depression is common), such an approach is not feasible with a randomly selected community sample.

The Role of Cognitive and Perceptual Factors

Perhaps the most significant advances in understanding the link between depression and maladaptive marital interaction are likely to come from the use of various and convergent sources of data in the assessment of both constructs. For example, given the knowledge mentioned above about the important role of spousal perception of the interactions, it is important that data be obtained not only from the depressed partner, but also from the spouse and, if feasible, from independent observers as well. Investigators must recognize that information about how the marital interaction is perceived is valuable in making accurate interpretations of the observed behavior. Couples' perceptions of their problems and the attributions of responsibility they make for the quality of their marriage may be more determinant of the course of the depression and any treatment outcome than is observer-rated assessment of their interactions alone (see Hooley, Richters, Weintraub, & Neale, 1987, for empirical support of this statement).

One strategy for obtaining such data was proposed by Gotlib and Hooley (1988). They suggested that target and control subjects be asked to observe and interpret their videotaped interactions with their spouses. This technique would enable the investigators to determine the degree to which subjects' perceptions and attributions correspond with independently assessed characteristics of the interaction. Also, target and control subjects could be required to evaluate each other's taped interactions as well as their own. This additional strategy would allow the experimenter to assess to what degree the depressed subjects' negative interpretations generalize beyond their own relationships.

Some of the studies reviewed in this paper illustrate the importance of obtaining measures of depression, marital distress, and marital interaction from the depressed individual, the non-depressed spouse and independent observers. With the inclusion of multiple sources of data and a focus on the meaning of the observed interactions from the perspective of the target and spouse, it may be possible to gain a clearer understanding of the nature of the relationship between depression and marital interaction patterns.

Use of Standardized Measures and Procedures

Future investigators in this field need to be concerned about using standardized measures and procedures. To be sure, there are important benefits to be derived from using a standard set of instruments and procedures in future studies of depression and marital functioning. The use of such measures would encourage communication among researchers because otherwise diverse studies would be more comparable. The findings obtained in one study could be compared more accurately with data from another study if the same standardized measures used.

In this regard, it is worth noting that there are a number of self-report marital questionnaires available. For example, the Marital Adjustment Test (MAT) and the

Dyadic Adjustment Scale (DAS), both widely used in the studies reviewed in this paper, have demonstrated acceptable reliability and validity. Therefore, rather than construct new instruments to measure similar constructs, it is advisable to utilize these accepted instruments. Then comparison across studies would be easier and more accurate.

While standardized instruments should be used to measure depression and marital quality, it is also important to utilize standardized procedures when examining marital interactions. Whenever possible, investigators should use standardized structured tasks or even unstructured tasks provided there is a manual for the implementation of such tasks. Regardless of the procedure selected, investigators must keep in mind that the type of task chosen will likely affect the nature of the data obtained.

Finally, it is possible that the degree of negativity in the marital interactions observed by investigators in these studies has been underestimated due to the obtrusive nature of being videotaped in the laboratory setting. Couples may have reacted to each other more positively as a result of being videotaped. Therefore, it may be helpful to make greater use of home observation as a method of gathering the necessary data (Lewinsohn & Shaffer, 1971). Couples are more likely to allow investigators a more accurate view of their interactions when such behavior is observed in its natural setting rather than in the laboratory. When observation of home interactions is not possible, extending the length of time generally given for the couples to interact may be beneficial. Given more time, the couples may become less aware of being videotaped as they become more engaged in their interaction. In any case, due to the reactivity effects present in many of the reviewed studies, the results should be generalized to extra-experimental situations with considerable caution.

Implications for Treatment

The cumulative results of the studies reviewed in this paper have implications for the assessment and treatment of depression. While the scope of this paper does not allow for a complete and detailed presentation of these implications, several general strategies and directions can be highlighted. In assessment of a married individual presenting with depressive symptomatology, it is initially important to secure a thorough evaluation of the marital relationship history and an understanding of the individual's social context, including the marriage and close family members. Although the studies reviewed above have concentrated on marital interaction patterns in marriages where one spouse is depressed, in some ways, the results are very likely to generalize to depressed unmarried individuals and their interactions with others (Coyne, 1976a; Howes & Hokanson, 1979; King & Heller, 1984). Therefore, the interpersonal relationships and social context of depressed single individuals must also be carefully examined as an accepted and normal component of assessment.

The results further indicate that, since there is a strong relationship between depression and marital distress, if a couple presents with marital discord, clinicians should be aware of potential depression in one spouse. Conversely, if a married woman presents with depression, clinicians should assess the marital relationship and consider marital therapy as a treatment of choice. Generally speaking, the time has come for assessment and therapeutic efforts concerning depression to be made within the context of the marital dyad.

The literature in the area of depression and marital distress is currently challenging the conceptualization that depressed individuals manifest distorted perceptions of their environment (e.g., Kowalik & Gotlib, 1987). The depressive cognitions that heretofore have been viewed as distortions of reality may be accurate perceptions of a negative flow of information from the depressed person's

social environment. A family systems orientation dealing with the depressed individual in the context of a pathological social system may be beneficial. Furthermore, if a depressed person reports good marital adjustment, the spouse can be incorporated into treatment as a source of support. On the other hand, if a depressed individual complains of marital dysfunction, then conjoint marital therapy may be the treatment of choice.

Regarding marital therapy for depression, those therapies of a social learning-behavioral orientation have been shown to be effective (Jacobson, Holtzworth-Munroe, & Schmaling, 1989; McLean, Ogston, & Grauer, 1973). This is not surprising in light of the fact that depression is very likely maintained in a coercive social environment (i.e., the discordant marriage). Therefore, treating the depression must include treating the social context in which it is embedded. Specifically, the findings of the studies cited in the present review imply the use of several components of marital therapy including, but not limited to the following:

1. Spouses and family members of depressed individuals can be taught to increase their caring behaviors and levels of caring affect in order to decrease dysphoric affect and behavior and to depend less on coercive control.

2. The focus in treatment can productively be placed on changing the asymmetrical and negative interactions. A related effort is to shift the interactive burden from the non-depressed spouse to a more shared and equal position in the dyad. This can be achieved in part through communication training, feedback from the therapist, and identification and alteration of positive and negative feedback loops within the relationship.

3. Efforts can be made to increase the proportion of positive verbal exchanges and decrease the frequency of negative interactions.

4. Marital therapy can include drug treatment and/or individual cognitive interventions depending upon the degree of marital distress, the severity of the

depression, and whether or not there appears to be a bio-chemical component to the depression.

Conclusively, the data highlight the seriousness and reality of the relationship between depression and dysfunctional marital interactions. Involvement of the spouse in treatment appears to be essential. The degree and direction of spousal involvement are dependent upon marital adjustment prior to the onset of marital discordand upon the severity of pathology. With depressed women in healthy marital relationships, treatment can focus on education about depression, reestablishment of healthy communication patterns within the marriage, and guidance for the non-depressed spouse as to how to cope with and support the depressed partner. Individual treatment, combined with conjoint sessions is indicated in these cases. Regarding couples with a history of marital discord, and who are currently experiencing marital dysfunction, more intensive marital therapy of a social learning orientation is indicated.

Conclusion

Clearly, all is not well within the marriages of depressed individuals. Interactive patterns are characterized by an overabundance of negativity, coercive processes including manipulation through aversive means, skill deficits, and asymmetrical communication patterns. In addition, the perceptions of the marital interaction held by both the depressed partner and the spouse are significant considerations for assessment and intervention.

An examination of the problem of depression from the perspective of the non-depressed spouse can serve as a needed supplement to the usual patient-centered approach to research and treatment (Coyne, Kessler, Tal, Turnbull, Wortman, & Greden, 1987). Future work in research, assessment, and intervention should ultimately adopt a more integrated, interactional approach, both methodologically

and conceptually. Research designs are needed that demonstrate how the characteristics of depressed persons and their spouses interrelate, how they are influenced by marital relationship history, and how they change over time.

Depression has been conceptualized as a self-perpetuating interpersonal system. Depressive symptomatology appears to be congruent with the ongoing interpersonal and marital situation of the depressed person, and the symptoms seem to have a mutually maintaining relationship through the response of the non-depressed spouse. Essentially, the depressed spouse and the marital partner collude to create a system in which feedback is difficult to receive and various efforts to change become system-maintaining in the long run.

In light of the studies examined in this review, the emphases on individual treatment of depression and specifically on the depressed person's distorted thinking may be overstated, thus warranting greater attention to the social context of marriage in which the depression occurs. Clinical depression is often indicative of a more generally distressed marriage and of dysfunctional interactional patterns. Therefore, marital and family therapy need to be more widely considered as either primary or adjunctive treatments for depression. Regardless of whether it is discordant and problematic marital interaction that leads to depression or depression that causes dysfunctional marital interaction, a reduction in the amount and degree of coercive, asymmetrical, and negative interactions may be a significant factor in the treatment of depression.

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